

**National Nanotechnology Initiative
"Research Directions II" Workshop
September 8-10, 2004
National Academy of Sciences
Washington, DC**

**Auditorium (and nearby breakout rooms)
National Academies' C Street Building**

FINAL DRAFT AGENDA (9/7/04)

Wednesday, September 8, 2004

10:30 am	Welcome to the National Academies	W. A. Wulf
10:35 am	Welcome	J. H. Marburger, III (invited)
10:45 am	Opening Remarks.....	P. J. Bond
10:55 am	Charge to Participants	A. H. Carim
11:05 am	Overview of the National Nanotechnology Initiative	M. C. Roco
11:23 am	Retrospective Overview of the 1999 Research Directions Workshop	R. S. Williams
11:40 am	Overview of Recent Legislation and Implementation.....	S. L. Hays
11:50 am	PCAST Perspectives on the NNI	E. F. Kvamme (invited)
12:00 noon	Lunch, and initial small-group discussions	
	Afternoon: NSET "Grand Challenge" Workshop reports:	
1:00 pm	Nanomaterials by Design	R. Hull
1:20 pm	Electronics/Photonics/Magnetics	G. S. Pomrenke
1:40 pm	Chemical, Biological, Radiological, and Explosive (CBRE).....	J. S. Murday
2:00 pm	Energy	E. D. Williams
2:20 pm	Environment.....	B. P. Karn
2:40 pm	Break	
3:00 pm	Advanced Healthcare, Therapeutics, and Diagnostics (Nanobiotechnology meeting)	B. A. Baird
3:20 pm	Nanomanufacturing.....	M. V. Tirrell
3:40 pm	Microcraft and Robotics (Nanomachines and Nanosystems)	M. N. Dastoor
4:00 pm	Instrumentation and Metrology	M. T. Postek
4:20 pm	Full-group open discussion on grand challenge areas, research targets, and unifying themes	
5:00 pm	Time reserved for public comments (<5 min. ea.)	
by 6:00 pm	Adjourn for the day	
	Dinner	On your own

Thursday, September 9, 2004

8:30 am	Recap of first day, announcements, schedule, instructions. Reiteration of charge.....	A. H. Carim
	Other NSET-supported or related meeting or workshop reports:	
8:45 am	Ethical, Legal, and Societal Implications.....	D. Baird
9:00 am	State and Local Nanotechnology Efforts and Coordination.....	S. Murdock
9:15 am	Agriculture and Food Systems	N. R. Scott
9:30 am	ChemVision 2020 meeting and chemical industry perspective	J. Solomon
9:45 am	Silicon Nanoelectronics meeting and semiconductor industry perspective	J. Hutchby
10:00 am	Charge to 1 st Breakout Session participants	E. C. Teague
10:05 am	Break	

- 10:20 am 1st Breakout Sessions (topic clusters; chairs as indicated):
 A) Nanomaterials by Design, Electronics/Photonics/Magnetics, CBRE (S. Williams)
 B) Energy, Environment (R. Hamers)
 C) Nanomedicine, Nanobiotechnology, Agriculture, and Food Systems (B. Baird)
 D) Nanomanufacturing, Nanomachines, and Nanosystems (C. Montemagno)
 E) tools: Instrumentation and Metrology, Advanced Buildings, and Simulations (R. Hocken)
- 11:50 am 1st Breakout Sessions writing: draft community input for workshop report; Working Lunch
- 1:00 pm Reports from 1st Breakout Sessions (<8 min. ea.)
- 1:45 pm Charge to 2nd Breakout Session participantsC. I. Merzbacher
- 1:50 pm 2nd Breakout Sessions (aspects of initiative; chairs as indicated):
 A) Fundamental scientific research (A. Majumdar)
 B) Application opportunities and technology transfer (C. Hunt)
 C) Infrastructure needs (T. Michalske)
 D) Societal implications: Ethical, social, legal, workforce and education, and environmental, health and safety (ESH) (D. Baird & D. Warheit)
 E) Funding strategy, interdisciplinary opportunities, grand challenges, interaction with other stakeholders (including the public) (C. Murray)
- 3:20 pm Break
- 3:35 pm 2nd Breakout Sessions writing: draft community input for workshop report)
- 4:45 pm Reports from 2nd breakout sessions (<8 min. ea.)
- 5:30 pm Final full-group discussion: research directions, vision, implementation
- 5:55 pm Wrap-up, thanks to participants, instructions and invitation for report-writing on Friday
- 6:00 pm Adjourn main conference
- Dinner On your own

Friday, September 10, 2004

- 8:30 am Non-federal meeting writing group participants (and any other volunteers) reconvene, discuss status, and begin/continue writing of report (w/interested feds present or available for questions, clarifications, reference information, etc.).
 Primary emphasis on crafting sections for executive summary, introduction, cross-cutting themes, and recommendations on implementation. Revisions and polishing as necessary of output from 1st and 2nd breakout sessions. Executive summaries of prior workshops to be included as appendices to report.
- 12:00 pm Final discussion and action items for report completion.
- 12:30 pm Adjourn. (Draft report complete. Distribute electronically or in print form to NSET members.)